

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	91	(544/203).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:43
L2	173	(544/201).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:49
L3	51	2 and catalyst	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:50
L4	1	3 and acidity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:50
L5	5	christian.inv. and kuhrs.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:51
L6	4	Eckehard.inv. and Danz.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:52
L7	8	wolfgang.inv. and Steiner.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:52
L8	5	Ralf-thomas.inv. and Rahn.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:53
L9	0	thomas.inv. and Grabier.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:53
L10	1	Reiner.inv. and Geter.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:53
L11	5	klaus.inv. and harth.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:54

EAST Search History

L12	3	markus.inv. and holzle.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:54
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EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	91	(544/203).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:43
L2	173	(544/201).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:49
L3	51	2 and catalyst	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:50
L4	1	3 and acidity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:50
L5	5	christian.inv. and kuhrs.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:51
L6	4	Eckehard.inv. and Danz.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:52
L7	8	wolfgang.inv. and Steiner.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:52
L8	5	Ralf-thomas.inv. and Rahn.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:53
L9	0	thomas.inv. and Grabier.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:53
L10	1	Reiner.inv. and Geter.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:53
L11	5	klaus.inv. and harth.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:54

EAST Search History

L12	3	markus.inv. and holzle.inv. and melamine	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/12/24 08:54
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10/542,306

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NEWS	17	OCT 30	CHEMLIST enhanced with new search and display field
NEWS	18	NOV 03	JAPIO enhanced with IPC 8 features and functionality
NEWS	19	NOV 10	CA/CAplus F-Term thesaurus enhanced
NEWS	20	NOV 10	STN Express with Discover! free maintenance release Version 8.01c now available
NEWS	21	NOV 20	CAS Registry Number crossover limit increased to 300,000 in additional databases
NEWS	22	NOV 20	CA/CAplus to MARPAT accession number crossover limit increased to 50,000
NEWS	23	DEC 01	CAS REGISTRY updated with new ambiguity codes
NEWS	24	DEC 11	CAS REGISTRY chemical nomenclature enhanced
NEWS	25	DEC 14	WPIDS/WPINDEX/WPIX manual codes updated
NEWS	26	DEC 14	GBFULL and FRFULL enhanced with IPC 8 features and functionality
NEWS	27	DEC 18	CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS	28	DEC 18	CA/CAplus patent kind codes updated
NEWS	29	DEC 18	MARPAT to CA/CAplus accession number crossover limit increased to 50,000
NEWS	30	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS EXPRESS			NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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FILE LAST UPDATED: 22 Dec 2006 (20061222/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

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=> s urea

L1 212014 UREA

=> s melamine

L2 41936 MELAMINE

=> s l1 and l2

L3 8928 L1 AND L2

=> s solid(l)catalyst

1049286 SOLID

744351 CATALYST

L4 36330 SOLID(L) CATALYST

10/542,306

=> s 13 and 14

L5 52 L3 AND L4

=> d 15 1-52 bib abs

L5 ANSWER 1 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:1073207 CAPLUS
DN 145:420796
TI Low temperature curable polyester finish paint for pre-coated metal coil
and preparation thereof
IN Liu, Caifang
PA Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 11pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1710000	A	20051221	CN 2005-10040856	20050701
PRAI	CN 2005-10040856		20050701		

AB The title finish paint includes solid 40-80%, has viscosity of 30-200 s, and is capable of forming film at 200-216° in 30-60 s. The title preparation includes (1) mixing glycidyl versatate, m-phthalic acid, adipic acid, methylpropanediol, organotin catalyst, stabilizer tri-Ph phosphite, and solvent xylene; reacting at 210-220° in inert gas atmospheric till distillate temperature reaches 80°; diluting, filtering; (2) mixing resultant modified glycidyl versatate, dye, dispersing aid, and mixed solvent; grinding to granularity $\leq 15 \mu\text{m}$, and filtering to obtain color paste; and (3) mixing the modified glycidyl versatate, amino resin, the color paste, and auxiliary to obtain final product.

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L5 ANSWER 2 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:715011 CAPLUS
DN 145:189695
TI Method for preparing polyurea polyol from amino resin
IN Xiu, Yuying; Wang, Shuhong; Luo, Zhongyu
PA South China University of Technology, Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.
CODEN: CNXXEV
DT Patent
LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1803886	A	20060719	CN 2006-10032676	20060106
PRAI	CN 2006-10032676		20060106		

AB The title method comprises (1) reacting melamine and formaldehyde at molar ratio of 1:3 with magnesium carbonate as catalyst at pH of 7-10 and 60-100°C for 10-60 min; (2) reacting the resulting trimethylol melamine with methanol at molar ratio of 1:(10-30) at 50-90°C for 0.5-2 h to give an amino resin solution; and (3) adding a polyether polyol with mol. weight of 2000-8000 and secondary hydroxyl content of 10-100%, distilling at 60-120°C and -0.1 to -0.05 MPa for 0.5-2 h to remove low b.p. substances, cooling to 30-50°C, adding an isocyanate at normal pressure, reacting for 10-80 min, and distilling at 60-120°C and -0.1 to -0.05 MPa for 0.5-2 h to remove the residual monomer. The product has solid content of 10-30% and urea index (molar ratio of isocyanate/amino resin) of (0.7-1.2):1, is free of halogen, P, Sb, and moisture, and has low cost, low viscosity, low acid value, high oxygen index and low smoke.

L5 ANSWER 3 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:627022 CAPLUS
 DN 143:134956
 TI High-solid polyester topcoat for coil and tin plate
 IN Zhu, Li; Liu, Weiping; Zheng, Jianlong; Wu, Kuilu
 PA Peop. Rep. China
 SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 15 pp.
 CODEN: CNXXEV
 DT Patent
 LA Chinese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1415682	A	20030507	CN 2002-138323	20020920
PRAI	CN 2002-138323		20020920		

AB The polyester coating is composed of film forming agent 20-65%, pigment 15-45%, crosslinking agent 5-30%, adjuvant 0.5-15%, solvent 10-20%, and film forming assistant 5-15%. The polyester film forming agent with a number averaged mol. weight of 500-5,000, a viscosity of 500-3000 mPa.s (23° 80% solid content), a hydroxy value of 50-300 mgKOH g-1, an acid value of 0-5 mgKOH g-1, and a solid content of (80 ± 5)%, is prepared from 1 part carboxylic acid (30-100% aromatic dicarboxylic acid, 0-70% aliphatic dicarboxylic acid, and 0-20% polybasic acid) and 1.3-1.8 parts alc. (80-100% dihydric alc. and 0-20% polyhydric alc.) by condensation polymerization

in mixed solvent (30-80% high b.p. arene and 10-50% ether ester, ketone or dicarboxylic acid ester) in the presence of esterification catalyst and thermal stabilizing agent at (230 ± 5)° under bubbling inert gas. The aromatic dicarboxylic acid is isophthalic acid, terephthalic acid, phthalic anhydride, or tetrahydrophthalic anhydride. The aliphatic dicarboxylic acid is selected from succinic acid, adipic acid, sebacic acid, azelaic acid, dodecanedioic acid, cyclohexanedicarboxylic anhydride, or 1,4-cyclohexanedicarboxylic acid. The dihydric alc. could be ethylene glycol, 1,4-butanediol, 1,6-hexanediol, nonanediol, decanediol, neopentyl glycol, neopentyl glycol mono-hydroxy-tert-pentanoate, 2-methyl-1,3-propanediol, 2-butyl-2-ethyl-1,3-propanediol, methylpentanediol, methylhexanediol, 1,4-cyclohexanedimethanol, etc. The polybasic acid is 1,2,4-benzenetricarboxylic acid anhydride or 1,2,4,5-benzenetetracarboxylic dianhydride. The polyhydric alc. is tri(hydroxymethyl)propane, glycerol, tri(hydroxymethyl)ethane, or pentaerythritol. The esterification catalyst is dibutyltin oxide, dibutyltin dilaurate, Sn(II) octanoate, or tetra-Bu titanate. The thermal stabilizing agent is H3PO4, tri-Ph phosphite, or tri(nonylphenyl) phosphite. The crosslinking agent is fully or partly etherified melamine resin, methoxylated/butoxylated melamine resin, methoxylated urea-formaldehyde resin, isophorone diisocyanate, hexamethylene diisocyanate, tolylene diisocyanate, diphenylmethane diisocyanate, or their dimer, trimer, or oligomer. The mixed solvent is Solvesso 100, 2-ethoxyethanol, 2-butoxyethanol, methoxypropanol, Et ether, cyclohexanone, acetone, etc. The pigment is Al, Cu, Zn, perlite pigment, quinacridone pigment, pyrroledione pigment, phthalocyanine pigment, azo pigment, carbazole derivative, TiO2, C black, etc. The adjuvant is defoamer, catalyst, dispersing agent, and/or suspending agent. Thus, the paint film formed by 30.6 parts melamine Cymel 303 crosslinked 150 parts polyester (1,6-hexanediol-isophthalic acid-2-Methyl-1,3-propanediol-phthalic anhydride-terephthalic acid-trimellitic anhydride copolymer), when used as the topcoat over epoxy basecoat on zinc-plated plate, has a pencil hardness of 2H, an impact strength of 100 cm, and a MEK resistance of more than 100 times.

L5 ANSWER 4 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:633916 CAPLUS
 DN 141:157909
 TI Two-stage reactor for the production of melamine
 IN Kuhrs, Christian; Danz, Eckehard; Steiner, Wolfgang; Rahn, Ralf-Thomas;
 Grassler, Thomas; Geier, Reiner; Harth, Klaus; Hoelzle, Markus
 PA BASF Aktiengesellschaft, Germany
 SO PCT Int. Appl., 21 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004065371	A1	20040805	WO 2004-EP327	20040116
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ				
	DE 10301703	A1	20040729	DE 2003-10301703	20030117
	DE 10337501	A1	20050414	DE 2003-10337501	20030814
	EP 1587797	A1	20051026	EP 2004-702691	20040116
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2006515369	T	20060525	JP 2006-500588	20040116
	US 2006167250	A1	20060727	US 2005-542306	20051118
PRAI	DE 2003-10301703	A	20030117		
	DE 2003-10337501	A	20030814		
	WO 2004-EP327	W	20040116		

AB High chemical reactions and yields in the production of melamine by decomposition of urea on solid catalysts may be obtained in a two-stage reactor, if in the main reactor a catalyst of low lewis acidity and in the post reactor a catalyst of preferably higher lewis acidity is used. The acidity of the catalyst (fluidized bed) used in the main reactor is 0.3-1.8 $\mu\text{mol/g}$, and in the post reactor (solid state catalyst) 2-12 $\mu\text{mol/g}$.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:605433 CAPLUS
 DN 141:141197
 TI Two-stage reactor for manufacture of melamine from urea
 IN Kuhrs, Christian; Danz, Eckehard; Steiner, Wolfgang; Rahn, Ralf-Thomas;
 Grassler, Thomas; Geier, Reiner; Harth, Klaus; Hoelzle, Markus
 PA BASF Ag, Germany
 SO Ger. Offen., 10 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10301703	A1	20040729	DE 2003-10301703	20030117
	WO 2004065371	A1	20040805	WO 2004-EP327	20040116
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ				
	EP 1587797	A1	20051026	EP 2004-702691	20040116
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	CN 1723203	A	20060118	CN 2004-80002014	20040116
	JP 2006515369	T	20060525	JP 2006-500588	20040116
	US 2006167250	A1	20060727	US 2005-542306	20051118
PRAI	DE 2003-10301703	A	20030117		
	DE 2003-10337501	A	20030814		
	WO 2004-EP327	W	20040116		

AB Melamine is manufactured by decomposition of urea in the presence of solid catalyst, in a system of 2 reactors. In the main reactor a catalyst with lower Lewis acidity is used, e.g., montmorillonite, while a catalyst with equal or higher Lewis acidity, e.g., Si-doped Al₂O₃ is used in the 2nd reactor.

L5 ANSWER 6 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:551210 CAPLUS
DN 139:118126
TI Polyurethane formulations using urea and/or urea
condensate and/or their salts as urethane formation catalysts
IN Blount, David H.
PA USA
SO U.S. Pat. Appl. Publ., 9 pp., Cont.-in-part of U.S. Ser. No. 973,553.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 16

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003134971	A1	20030717	US 2003-361177	20030210
	US 5854309	A	19981229	US 1996-723779	19960930
	US 6464903	B1	20021015	US 2000-693194	20001023
	US 2003022959	A1	20030130	US 2001-973553	20011009
	US 6777469	B2	20040817		
PRAI	US 1996-723779	A2	19960930		
	US 2000-693194	A2	20001023		
	US 2001-973553	A2	20011009		
	US 1998-149847	A2	19980908		

AB The title formulations, may be produced in the form of solids, rigid foams, flexible foams, elastomers, adhesives and water based coating, are formed by mixing and reacting: (A) a urea and/or urea condensate and/or their salts, (B) compds. containing one or more active hydrogens, (C) polyisocyanates, (D) blowing agent, (E) surfactant, (F) salt forming agent, (G) carbonization auxiliaries, (H) urethane catalyst, and (I) filler. In one example, 15 parts polyoxyalkylene triol was mixed with 5 parts urea powder and 8 parts T-DI and cured to give a tough flexible solid polyurethane product.

L5 ANSWER 7 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:792358 CAPLUS
DN 137:295961
TI Nitrogen-containing phenolic resin composition for laminated board and
manufacture of copper-clad laminated board
IN Sakai, Kazunaga; Narabe, Yoshiyuki; Ito, Shinji; Sato, Miki
PA Hitachi Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002302590	A	20021018	JP 2001-107661	20010405
PRAI	JP 2001-107661		20010405		

AB The composition containing 10-40% (as solid) N are those obtained by reaction of HCHO, phenols, urea, and melamine in the presence of an alkali catalyst, i.e., by (a) separated reaction of HCHO and phenols, urea, and melamine followed by mixing of the resulting 3 reaction products, (b) reaction of HCHO and 2 selected from phenols, urea, and melamine, reaction of HCHO and the rest of the components, and mixing of the reaction products, (c) reaction of HCHO and a mixture of other 3 components, (d) reaction of HCHO and 2 selected from phenols, urea, and melamine followed by reaction of the reaction product, HCHO, and the rest of the 3 components, (e) reaction of HCHO and 1 selected from phenols, urea, and melamine followed by reaction of the reaction product, HCHO, and rest of the 3 components, or (f) reaction of HCHO and phenols, urea, or melamine, reaction of the reaction product, HCHO, and 1 selected from the rest of the 2 components, and reaction of the reaction product, HCHO, and the rest component. Fibrous substrates are impregnated with the composition, dried, impregnated with a dry oil-modified phenolic resin, laminated to one another, further laminated with or sandwiched between Cu foil(s) having an adhesive, and hot-pressed to give the Cu-clad laminated board. The laminated board prepared by using PhOH in the composition and tung oil- and brominated epoxy resin-modified HCHO-PhOH-xylene copolymer for further impregnation showed good tracking resistance, good solder heat resistance, and good elec. insulation resistance.

10/542,306

L5 ANSWER 8 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:669681 CAPLUS
DN 137:202302
TI Aqueous urea for fire control of polyurethane foam
IN Blount, David H.
PA USA
SO U.S., 9 pp., Cont.-in-part of U.S. 6,258,298.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 16

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6444718	B1	20020903	US 2000-653872	20000901
	US 5854309	A	19981229	US 1996-723779	19960930
	US 6258298	B1	20010710	US 1998-149847	19980908
PRAI	US 1996-723779	A3	19960930		
	US 1998-149847	A2	19980908		

AB Aqueous urea and/or aqueous urea condensate and/or aqueous urea composition may be used to fight grass, forest, building, and other flammable organic material by applying it to these flammable organic materials. The aqueous urea and/or aqueous urea condensate and/or aqueous composition may also be incorporated into flammable materials

such

as solid and foam plastic and natural materials. Aqueous urea composition are produced by adding and mixing C auxiliaries, such as P-containing compds., metal-containing compds. that will accelerate carbonization, heat reflector, surfactant and fillers to the aqueous urea. A flame retardant polyurethane foam consists of mixing and reacting, optionally with added heat, (a) 25-100 parts aqueous urea, (b) 0.5-100 parts silicon surfactant, (c) 0.25-100 parts urethane catalyst, and (d) 25-100 parts polyisocyanate prepolymer. When the aqueous urea and/or aqueous urea composition was incorporated into rigid polyurethane foam and tested with a propane torch with a 2 in. flame held against the foam for 1 min, the flame did not spread, the foam melted and/or a char was formed. The flexible flame retardant polyurethane foams were tested and passed the Calif. TB 133 test.

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

10/542,306

L5 ANSWER 9 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:676658 CAPLUS
DN 135:246584
TI Method and device for catalytically treating exhaust gas containing dust and oxygen
IN Samant, Gurudas; Sauter, Gerd
PA Germany
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001066233	A1	20010913	WO 2001-EP2612	20010308
	W: AE, AT, AU, BA, BG, BR, CA, CH, CN, CR, CZ, DE, DK, ES, FI, GB, HR, HU, ID, IL, IN, IS, JP, KE, KP, KR, LK, LU, MK, MX, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, TR, UA, UG, US, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	DE 10011325	A1	20010927	DE 2000-10011325	20000310
	DE 10011327	A1	20010927	DE 2000-10011327	20000310
	CA 2391710	A1	20010913	CA 2001-2391710	20010308
	EP 1244511	A1	20021002	EP 2001-925398	20010308
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	DE 20122251	U1	20050317	DE 2001-20122251	20010308
	US 2003157007	A1	20030821	US 2002-30198	20020819
PRAI	DE 2000-10011325	A	20000310		
	DE 2000-10011327	A	20000310		
	WO 2001-EP2612	W	20010308		

AB The invention relates to a method and a device for catalytically treating exhaust gas containing sulfur oxide and nitrogen oxides, dust and oxygen and emanating from chemical processes or the combustion of fossil secondary fuels or fossil fuels from power plants, such as waste or slurry, or from glass and cement works. The exhaust gas is freed from sulfur oxides and nitrogen oxides in a reactor having a solid catalyst and at a temperature ranging from 200 °C to 500 °C and in the presence of and/or by adding one or more mediums selected from free oxides, carbonates and hydroxides of calcium, magnesium, sodium and potassium.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:454311 CAPLUS
DN 133:75436
TI Fire-retardant intumescent coating composition
IN Liu, Feipeng
PA J.M. Huber Corporation, USA
SO U.S., 10 pp., Cont.-in-part of U.S. 5,968,669..
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6084008	A	20000704	US 1999-354404	19990715
	US 5968669	A	19991019	US 1998-102927	19980623
PRAI	US 1998-102927	A2	19980623		

AB A title composition comprises expandable graphite particles, a solid absorbent material such as limestone or CaCO_3 , a polymeric binder such as phenol-formaldehyde resin, preferably a carbonific material such as pentaerythritol, preferably a blowing agent such as urea, a solvent preferably including 0.1 weight% of surfactant, and a rheol. modifier such as attapulgite clay. To increase absorption and neutralization of toxic gases the composition preferably includes an absorbent promoter such as aluminum hydroxide. The coating can be applied on various lignocellulosic materials such as lumber, used for interior and exterior applications such as roofing, walls, and floor sheathing, and applied to other substrates such as glass-fiber laminated composites, etc. Thus, heat-expandable graphite 19.564, CaCO_3 17.890, aluminum trihydrate 1.630, phenol-formaldehyde resin (50% solids) 22.032, resorcinol-formaldehyde resin (75% solids) 0.625, pentaerythritol 3.362, melamine 1.674, chloroparaffin 1.674, Aerosil 0.063, surfactant 0.001, catalyst 0.044, water 26.438 and phenol-formaldehyde resin extender 5.001 weight% were mixed to obtain a fire-retardant intumescent coating composition. The above coating was applied on both sides of oriented strand panel at 150 lbs/msf, thermally cured under IR lamps for .apprx.20 min and then oven cured at 120° for .apprx.30 min, giving average flame spread index 25.0, ignition time 87.7 s, average heat release rate in the first 60 s after ignition 36.5 kW/m², and average specific extinction area in the whole burning process 104.0 m²/kg.

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:394094 CAPLUS

DN 131:35053

TI Reduction of nitrogen oxides in oxygen-containing waste gases,
particularly engine exhaust gases

IN Guerich, Gunter; Luers, Bernhard; Hernier, Manuel

PA FEV Motorentechnik G.m.b.H. und Co. K.-G., Germany

SO Ger. Offen., 12 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19845944	A1	19990617	DE 1998-19845944	19981006
	WO 9930811	A1	19990624	WO 1998-EP7937	19981207
	W: JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 969915	A1	20000112	EP 1998-965777	19981207
	R: DE, ES, FR, GB, IT, NL				
	JP 2001523165	T	20011120	JP 1999-531987	19981207
PRAI	DE 1997-19755376	A1	19971212		
	DE 1998-19821494	A1	19980513		
	DE 1998-19845944	A	19981006		
	WO 1998-EP7937	W	19981207		

AB NOx is reduced in oxygen-containing waste gases, especially engine exhaust gases, by

contacting with a reducing agent in the presence of a reduction catalyst. The solid N-containing reducing agent, e.g., cyanuric acid or melamine, is evaporated from a surface in the gas line and subjected to pyrolysis or hydrolysis, forming a reducing agent which is mixed with the gases in the presence of the catalysts.

L5 ANSWER 12 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1996:211873 CAPLUS

DN 124:233974

TI Manufacture of melamine from urea with a fluidized
solid acid catalyst

IN Takasu, Isao; Wakimura, Kazuo; Hase, Tadaharu; Kajikuri, Tsutomu

PA Mitsui Toatsu Chemicals, Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08027127	A	19960130	JP 1994-167874	19940720
PRAI	JP 1994-167874		19940720		

AB Melamine is prepared by the reaction of urea and/or its thermal decomposition product through a fluidized solid acid catalyst at 350-500°. Thus, feeding urea at 11 kg/h into a fluidized bed containing 150 kg γ -alumina (particle distribution 10-300 μm ; average diameter 55 μm) which was fluidized by 75:25 NH_3 - CO_2 mixture and heating at 400° and 0.5-1.0 kg/cm²-G gave melamine showing conversion 89%.

10/542,306

L5 ANSWER 13 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:685783 CAPLUS
DN 121:285783
TI Selective catalytic reduction of NOx in oxygen-containing exhaust gases
IN Eberhard, Jacob; Kreutmair, Josef
PA Man Nutzfahrzeuge GmbH, Germany
SO Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	EP 615777	A1	19940921	EP 1994-101681	19940204
	EP 615777	B1	19970827		
	R: AT, DE, FR, IT, SE				
	DE 4308542	A1	19940922	DE 1993-4308542	19930317
	AT 157278	T	19970915	AT 1994-101681	19940204
PRAI	DE 1993-4308542	A	19930317		

AB Microprills of solid urea are fed to the gas and then hydrolyzed to NH3 and CO2 before contacting with the reduction catalyst.

10/542,306

L5 ANSWER 14 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:274692 CAPLUS
DN 120:274692
TI Microcoacervation of burning rate catalyst for propellant
IN Sayles, David C.
PA United States Dept. of the Army, USA
SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5281286	A	19940125	US 1992-865540	19920409
PRAI	US 1992-865540		19920409		

AB The coacervation of burning rate catalyst for propellant such as
ferrocene and ferrocene derivative is carried out in a coacervation mixture at
a

reaction temperature from about 40°C to about 55°C. The
coacervation mixture comprises 70-80 parts of a 1:1 ratio of water and a
water soluble polyol, an urea derivative, and an aldehyde or ketone.
Micro-droplets of the ferrocene derivative 2,2-bis(ethylferrocenyl)propane,
are formed by vigorous agitation of the coacervation mixture containing the
ferrocene derivative. A polymeric coating on the outer surface of the
micro-droplets produces a coacervate which is separated from the coacervation
mixture. The coacervate polymeric coating of about 10 weight% enables the
coated ferrocene derivative to be mixed in a solid propellant composition
without rupturing and to achieve improved stability and compatibility as
compared to liquid ferrocene and liquid ferrocene derivs.

L5 ANSWER 15 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:247636 CAPLUS
DN 120:247636
TI Influence of different catalyst systems on the hydrolytic stability of
particleboards bonded with unmodified and modified UF-resins
AU Lee, T. W.; Roffael, E.; Dix, B.; Miertzsch, H.
CS For. Res. Inst., Kepong, Morocco
SO Holzforschung (1994), 48(Suppl.), 101-6
CODEN: HOLZAZ; ISSN: 0018-3830
DT Journal
LA English
AB After a storage time of 1 yr, the influence of different catalyst
systems on the release of HCHO and volatile acids from particleboards
bonded with unmodified and modified urea-HCHO (UF) resins was
studied at 30° (only for HCHO), 40°, and 50 ° and
100% relative humidity. Modification of UF resins with a melamine
(I) resin (HCHO-melamine molar ratio 1.6:1) and resorcinol (II)
significantly increased the hydrolysis resistance of the UF resin in the
boards. II, especially at higher temps., was even more effective than I resin.
Measurable differences in the HCHO release of particleboards were
detected. The boards were sep. bonded with 2 low-emission UF resins with
subtle differences in the chemical composition. The amount of hardener, varied
between 0.8 and 3.2% (based on resin of 66% solids), had practically no
influence on the release of volatile acids from particleboards. In
contrast to the behavior of solid wood, UF resin particleboards
made from pine chips released substantially more HCOOH than HOAc, especially at
high temps. Modification of the UF resin with II and I resin had no
effect on the release of HOAc from the boards. The release of HCOOH
decreased slightly on modifying the resin with II and I resin. The
influence of modification and resin type on the hydrolytic resistance of
the boards was still apparent, even after a storage time of 1 yr.

L5 ANSWER 16 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:455362 CAPLUS
DN 119:55362
TI Disposal of acidic petroleum refining residues
IN Dimun, Milan; Lazar, Lubomir; Zeman, Svatopluk; Lipka, Radislav; Kellner, Michal; Kabatova, Viera; Truchlik, Stefan
PA Czech.
SO Czech., 3 pp.
CODEN: CZXXA9
DT Patent
LA Slovak
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CS 273073	B1	19910312	CS 1988-5581	19880812
PRAI	CS 1988-5581		19880812		

AB During disposal, acid petroleum refining residues containing H₂SO₄ 15-70, sulfoacids 5-50, oil 10-60, and water 5-30 weight% are used as a catalyst and constructed with urea, dicyandiamide, guanidine, semicarbazide, thiourea, and/or melamine and Cl-3-aldehydes (especially formaldehyde or glyoxal) or urea-formaldehyde or phenol-formaldehyde resin. The resulting product is useful in manufacture of fertilizers, composite thermal insulators, and carbonaceous materials. Thus, petroleum refining residue containing H₂SO₄ 37.9, sulfo acids 25.8, mineral oil 24.3, and water 12 weight % was contacted with a reaction. for mixture of 38% formaldehyde and urea to give a solid product which was ground and used in manufacturing of slow-release N fertilizers.

L5 ANSWER 17 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1993:239928 CAPLUS

DN 118:239928

TI Apparatus for supplying the reducing agent used in flue gas denitration and catalysts for decomposing the reducing agent to form ammonia used in the denitration

IN Uchiyama, Tsutomu; Takeda, Hiroshi; Imada, Naomi; Ito, Meiji; Nitta, Masahiro; Morita, Isato; Mori, Yoshimichi; Nagai, Yoshinori

PA Zaidan Hojin Sekiyu Sangyo Kasseika Center, Japan; Idemitsu Kosan Co., Ltd.; Babcock-Hitachi K. K.

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05015739	A	19930126	JP 1991-43172	19910308
PRAI	JP 1991-43172		19910308		

AB NOx is removed from flue gases or exhaust gases by catalytic reduction in an apparatus comprising means for holding the solid N-containing compds. (as reducing agent) in a cylindrical casing, means for passing hot air and steam through a catalyst bed for decomposing the reducing agent at 250-500° to form NH₃, and means for contacting the flue gases with NH₃ to convert NO_x into N₂ and water. The reducing agent includes urea, cyanuric acid, melamine, biuret, (NH₄)₂CO₃, and (NH₄)HCO₃. The catalysts may contain alumina, silica, silica-alumina, calcia, magnesia, titania, and zeolites.

L5 ANSWER 18 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1992:642784 CAPLUS

DN 117:242784

TI Preparation of photosensitive particle-containing microcapsules useful for photothermal-transfer recording

IN Minami, Toru; Ohayashi, Hiroharu; Noda, Mariko; Yanagi, Tatsuro; Takenochi, Masanori; Miyagawa, Masashi; Yaegashi, Hisao; Okuma, Norio; Kobayashi, Motokazu

PA Sanyo Chemical Industries Ltd., Japan; Canon K. K.

SO Jpn. Kokai Tokkyo Koho, 9 pp.

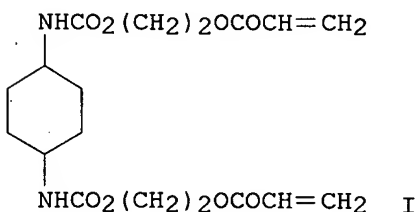
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04138464	A	19920512	JP 1990-258833	19900929
PRAI	JP 1990-258833		19900929		
GI					



AB In a method of preparing the title microcapsules comprising dispersing a core of solid particles made of a photosensitive composition containing an addition-polymerizable compound having an ethylenic unsatd. double bond and a photoinitiator in an aqueous solution containing an aminoaldehyde resin precursor and

polycondensing the precursor by using an acid catalyst to form an aminoaldehyde resin water-insol. coating on the core, the quantity of HCHO in the aqueous solution is ≤ 5 weight% and the melamine content in the precursor is ≤ 60 weight%. The photothermal-transfer recording material using the microcapsules show good photosensitivity and provide high resolution color images. Thus, particles prepared from I, 3,3'-carbonylbis(7-diethylaminocoumarin), Lionel Yellow SS-OW (dye), and a binder resin were dispersed in an aqueous solution containing Sumitex Resin

ULY (urea-melamine-HCHO precondensate), and the dispersion was adjusted to pH 4.0 by adding AcOH, reacted, and filtered to give a microcapsule powder. The powder was coated on a PET film to give a transfer recording sheet, which was recorded by using a thermal head under light-irradiation and transferred onto a receptor paper to give images.

L5 ANSWER 19 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:556718 CAPLUS
DN 117:156718
TI Reaction mechanism of catalytic reduction of nitric oxide by urea
AU Tachi, Takahiro; Kato, Akira; Yamashita, Hisao
CS Hitachi Res. Lab., Hitachi Ltd., Hitachi, 319-12, Japan
SO Nippon Kagaku Kaishi (1992), (8), 812-16
CODEN: NKAKB8; ISSN: 0369-4577
DT Journal
LA Japanese
AB Solid reducing agents for selective catalytic reduction of NO over MoO₃-TiO₂ catalyst were investigated. Urea, cyanuric acid, melamine, and biuret were examined as substitutes for NH₃. The ability of these agents to reduce NO was of the same order as that of NH₃ at 250-450° and a space velocity of 120,000/h. The mechanism of NO-urea reaction on MoO₃-TiO₂ catalyst was also investigated. Urea reacted with NO at a 1:2 molar ratio in the presence of O and water vapor and the reaction was retarded in the absence of O. Urea was completely hydrolyzed to NH₃ and CO₂ >300°. The MoO₃-TiO₂ catalyst promoted the hydrolysis of urea. From the FTIR anal. of species adsorbed on the catalyst, NH₄⁺ resulting from the adsorption of NH₃ on the Broensted acid site was observed after the catalyst was contacted with urea. This species disappeared after the catalyst was contacted with NO. It may be concluded that NO reacts with NH₃ adsorbed on the Broensted acid site that formed by hydrolysis of urea.

L5 ANSWER 20 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1992:175444 CAPLUS
 DN 116:175444
 TI Flowable powders containing liquid or semisolid epoxy resins
 IN Renner, Alfred; Cotting, Jacques Alain
 PA Ciba-Geigy A.-G., Switz.
 SO Eur. Pat. Appl., 8 pp.
 CODEN: EPXXDW
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 462053	A2	19911218	EP 1991-810401	19910528
	EP 462053	A3	19920513		
	EP 462053	B1	19970115		
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
	AT 147774	T	19970215	AT 1991-810401	19910528
	ES 2098336	T3	19970501	ES 1991-810401	19910528
	US 5525685	A	19960611	US 1991-706683	19910529
	KR 172126	B1	19990330	KR 1991-9008	19910531
	CA 2043732	A1	19911206	CA 1991-2043732	19910603
	CA 2043732	C	20020219		
	BR 9102300	A	19920114	BR 1991-2300	19910604
	JP 04227950	A	19920818	JP 1991-159770	19910604
	JP 3106211	B2	20001106		
PRAI	CH 1990-1878	A	19900605		

AB Free-flowing powders, useful for curable moldings, coatings, adhesives, etc., are prepared from liquid or semisolid epoxy resins and solid colloidal HCHO-urea or HCHO-melamine copolymers having pore volume >1 mL/g and sp. surface >5 m²/g. Thus, adding 34.85 g liquid bis(trimethylolpropane) tetraglycidyl ether to 30 g fluidized HCHO-urea resin powder (Pergopak M 2) over 10 min gave a free-flowing powder, which was mixed with hardeners (polyesters) and a catalyst to prepare a curable powder coating composition

10/542,306

L5 ANSWER 21 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:128238 CAPLUS
DN 114:128238
TI Apparatus and method for denitration of flue gases using solid reducing agents
IN Kako, Hiroyuki; Yoshida, Kunikatsu; Katsuta, Yasutsune; Nishimura, Yasuyuki; Ito, Meiji; Nitta, Masahiro
PA Babcock-Hitachi K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 02261519	A	19901024	JP 1989-82571	19890331
PRAI	JP 1989-82571		19890331		

AB NOx is removed from boiler flue gases or diesel exhaust gases by contacting with a solid reducing agent (especially, urea, melamine, cyanuric acid, biuret, etc.) in a catalytic reactor comprising a screw feeder, a dual-layer spray nozzle for injecting the solid reducing agent into flue duct, and a porous ceramic filter at down stream for trapping the catalyst fines. The apparatus prevents secondary pollution and increases denitration efficiency.

L5 ANSWER 22 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1987:535769 CAPLUS

DN 107:135769

TI Wrinkle resistance and tensile strength of jute-based fabrics modified by treatment with N-methylol system: part I - effect of treatment in presence of inorganic salt catalysts

AU Som, N. C.; Bagchi, A.; Mukherjee, A. K.

CS Appl. Chem. Div., Indian Jute Ind. Res. Assoc., Calcutta, 700 088, India

SO Indian Journal of Textile Research (1987), 12(2), 78-87

CODEN: IJTRDU; ISSN: 0377-8436

DT Journal

LA English

AB The wrinkle resistance and tensile strength of 100% jute plain weave fabrics were determined after treatment with urea-HCHO resin (I), melamine-HCHO resin (II), dimethylolethyleneurea (III), or DMDHEU in presence of $(\text{NH}_4)_2\text{HPO}_4$, MgCl_2 , ZnCl_2 , $\text{Zn}(\text{NO}_3)_2$, FeCl_3 , or AlCl_3 . The ammonium salt catalysts gave better wrinkle recovery angle for I and II finishes than metal salt catalysts which were effective in III and DMDHEU finishes. The wrinkle recovery angles for the jute fabrics were highest for MgCl_2 in both III and DMDHEU finishes (254 and 260°, resp.). DMDHEU gave a wrinkle recovery angle better than any other finish and optimum results were obtained at 12% solid add-on in presence of MgCl_2 catalyst. Jute gave the optimum wrinkle recovery angle at 150° curing temperature with 5 min curing time. III- and DMDHEU-treated jute fabrics retained a higher tensile strength than those finished with I or II. Comparison of properties with similarly finished cotton textiles was discussed.

10/542,306

L5 ANSWER 23 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:51245 CAPLUS
DN 104:51245
TI Reactors for melamine production
IN Sonoda, Kiskey; Sumitomo, Chokichi
PA Mitsui Toatsu Chemicals, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60204771	A	19851016	JP 1984-59628	19840329
	JP 05033223	B	19930519		
PRAI	JP 1984-59628		19840329		

OS CASREACT 104:51245

AB In melamine production by feeding molten urea through multiple nozzles into a reactor containing a fluidized solid acid catalyst, a tube having the same distance between the branch point and the nozzle is used to give a uniform flow rate of molten urea at all nozzles.

L5 ANSWER 24 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1981:620821 CAPLUS
 DN 95:220821
 TI Solid reactive catalyst for amino resins
 IN Markessini, Andrew C.
 PA Enigma N. V., Neth.
 SO Brit. UK Pat. Appl., 6 pp.
 CODEN: BAXXDU

DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND.	DATE	APPLICATION NO.	DATE
PI	GB 2061301	A	19810513	GB 1980-30736	19800924
	GB 2061301	B	19830810		
	IN 153459	A1	19840721	IN 1979-DE692	19790927
PRAI	GB 1979-33204	A	19790925		

AB A solid reactive catalyst for use in combination with a conventional NH₄Cl curing catalyst, which increases the rate of polycondensation of aminoplast resins useful for bonding lignocellulosic materials in the production of particle boards, comprises a water-soluble aldehyde which is solid at 25° in combination with urea and/or melamine and an alkali metal halide. Thus, to a gluing mixture containing an aqueous HCHO-urea resin solution (65% solids) 2250, 20% aqueous NH₄Cl 219, paraffin 25, and water 800 g were added 95% paraformaldehyde 76, urea prills 112, and NaCl 109 g. Particle boards manufactured by blending wood flakes with the composition had

d. 655

kg/cm³, tensile and bending strengths 5.5 and 240 kg/cm², resp., and water absorption after 24 h 12% compared with 660 kg/cm³, 5.0 and 250 kg/cm², and 13%, resp., for boards manufactured from an aminoplast composition not containing

addnl. catalyst.

10/542,306

L5 ANSWER 25 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1981:571813 CAPLUS
DN 95:171813
TI Deoxygenator for seal-packing
PA Kishimoto, Akira, Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 56087428	A	19810716	JP 1979-163532	19791218
	JP 62052619	B	19871106		
PRAI	JP 1979-163532	A	19791218		

AB A diphenol and HCHO are condensation polymerized to novolak or reduced resol resin containing 50-850 mmols diphenol/100 g solid, and mixed with 1-1000% anion-exchange resin, ZnO, MgO, CaCO₃, zeolite, NH₃-resol, melamine, or urea resin as solid electron donor, and is used for food storage. Thus, 1 mol hydroquinone and 238 g formalin were reacted at 90° for 3 h in the presence of acid catalyst, poured into H₂O, filtered, washed, and dried. When a mixture of the resin and micropowd. and moistened anion-exchange resin(ROH) 0.5 g each was sealed in a 150 mL glass vessel along with air, 10.5 mL O₂ was absorbed after 24 h.

10/542,306

L5 ANSWER 26 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1979:558527 CAPLUS
DN 91:158527
TI Solid urea resins
IN Otsu, Masaaki; Kitsuda, Yoshihiro
PA Matsushita Electric Works, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 54076695	A	19790619	JP 1977-144407	19771130
PRAI	JP 1977-144407	A	19771130		

AB HCHO composition (from air oxidation of MeOH) was mixed with urea to give a composition containing HCHO 50-73, MeOH <6, urea 7-20, and water to 100%, treated with urea to HCHO/urea 1.2-2.5 and then >5 parts (based on 100 parts urea) melamine, and condensed in the presence of an alkali catalyst to give a sirup which was then freed from water to give a solid resin [25036-13-9]. For example, a HCHO composition (HCHO 60, MeOH 2, urea 10, water 28%) 100, urea 65, and melamine 3.75 parts was treated with 0.5 part hexamethylenetetramine to pH 7.5, heated at 60° for 70 min to pH 6.5, treated with 0.2 part hexamethylenetetramine to pH 7.2, further heated for 30 min, mixed with 0.04 part NH4Cl and 0.6 part Zn stearate, and freed from water in a kneader at 80° for 120 min to give a tack-free, solid resin with good workability.

L5 ANSWER 27 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1979:458398 CAPLUS
DN 91:58398
TI Encapsulated water-dispersible materials
IN Golden, Ronald
PA Champion International Corp., USA
SO U.S., 5 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4157983	A	19790612	US 1977-819830	19770728
PRAI	US 1977-819830	A	19770728		

AB Water-dispersible materials, e.g. inorg. fire retardants, herbicides, dyes, pigments, etc., were encapsulated by mixing an emulsifier, oily H₂O-immiscible solvent for the emulsifier, formaldehyde-urea copolymer (I) [9011-05-6] or an amine-modified I, the H₂O-dispersible material, and H₂O to form a H₂O-in-oil emulsion, adding an amphipathic (both hydrophilic and oleophilic) acidic catalyst to cure the polymer, and separating the solid I capsules containing the H₂O-dispersible material. Thus, a mixture comprising 37% aqueous HCHO 220, urea 80, and melamine 2 g was adjusted to pH 8 with triethanolamine and heated 1 h at 70° to give a terpolymer (II) [25036-13-9] solution. The solution was cooled to 25°, and 24 g Hercules Monarch Green WD [1328-53-6] pigment was dispersed in the solution. The pigmented II solution was emulsified with a solution of 12 g Tetronic 1502 emulsifier in 200 g xylene. II was cured by adding 50 mL 3.6 N solution of SO₂ in xylene to the emulsion. After 1 h, the emulsion was mixed with 500 g H₂O, adjusted to pH 10 with NaOH, heated to drive off xylene, and centrifuged to recover a dark green cake of encapsulated pigment. The product was easily redispersed in both H₂O and oily solvents.

L5 ANSWER 28 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1977:518768 CAPLUS
 DN 87:118768
 TI Aminosilicate compounds and their condensation products
 IN Blount, David H.
 PA USA
 SO U.S., 6 pp. Cont.-in-part of U.S. 3,979,362.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 55

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4033935	A	19770705	US 1976-652338	19760126
	US 3979362	A	19760907	US 1975-559313	19750317
	US 4169930	A	19791002	US 1977-786617	19770408
	US 4100112	A	19780711	US 1977-798329	19770519
	US 4185147	A	19800122	US 1978-955327	19781027
	US 4242497	A	19801230	US 1980-110925	19800110
	AU 8167785	A	19811126	AU 1981-67785	19800428
	EP 50622	A1	19820505	EP 1981-900349	19800428
	R: FR				
	EP 55256	A1	19820707	EP 1981-900762	19800626
	R: FR				
PRAI	US 1970-71628	A2	19700911		
	US 1975-559313	A2	19750317		
	US 1972-262485	A2	19720614		
	US 1976-652338	A3	19760126		
	US 1977-786617	A2	19770408		
	US 1978-955327	A3	19781027		
	WO 1980-US487	A	19800428		
	WO 1980-US845	A	19800626		
AB	A silicic acid [1343-98-2] derivative or silica gel was treated with an amine in the presence of Na ₂ CO ₃ [497-19-8] catalyst and the intermediate was polymerized with an aldehyde to give a moldable resin. Thus, 40 parts moist silica gel was mixed with 20 parts urea [57-13-6] and heated to 90-150° for 20-60 min to give urea silicate [H ₂ NCONHSi(O)OH] (I) [63812-87-3]. Treatment of I with HCHO (1:1 molar ratio) at 70-100° for 20-60 min gave a clear resin [63812-88-4] which could be obtained either as a thick liquid or as a solid.				

L5 ANSWER 29 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1976:424861 CAPLUS
DN 85:24861
TI Ceramic cellular structure having high cell density
IN Cleveland, Joseph J.
PA GTE Sylvania, Inc., USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3943994	A	19760316	US 1974-455193	19740327
	US 4017347	A	19770412	US 1975-627515	19751031
	US 4025462	A	19770524	US 1975-627536	19751031
PRAI	US 1972-313101	A2	19721207		
	US 1974-455193	A3	19740327		

AB A cellular structure of green ceramic tape is formed from finely divided sinterable solid particles of ceramic raw materials uniformly distributed throughout a fugitive plastic supporting matrix. The cells of the structure (cell d. ≤ 1600 cells/in.² and wall thickness ≥ 2 mils) are defined by alternate corrugated and flat ceramic tape portions where the cells completely traverse the article from one face to the opposite face. The weight ratio of the supporting matrix to the raw materials in the tape is 1:3 to 1:6. The supporting matrix contains 28.5-74.5 resin containing 50-95 weight % poly(vinyl butyral) and the remainder amine thermosetting resin (melamine-HCHO and urea -HCHO), a plasticizer (alkyl phthalate or dialkyl phthalate) 25-70, and deflocculating agent 0.5-1.5 weight %. The fired structures are useful as rotary heat regenerators, stationary heat recuperators, and catalyst supports.

L5 ANSWER 30 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1976:45400 CAPLUS
DN 84:45400
TI Thermal insulation of mineral fiber matrix bound with phenolic resin
IN Higginbottom, Harold P.
PA Monsanto Co., USA
SO U.S., 8 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3919134	A	19751111	US 1974-459530	19740410
	AU 7579982	A	19761014	AU 1975-79982	19750409
PRAI	US 1974-459524	A	19740410		
	US 1974-459530	A	19740410		

AB Thermal insulation with improved thermal stability and resistance to punking consisted of a matrix of mineral fibers bound with a phenolic resin which was applied as an aqueous solution or dispersion of a resole modified

with dicyandiamide (I) [461-58-5] or a melamine derivative, and containing an alkoxymethylaminothiazine and a proteinaceous compound A mixture of phenol 1.00, 50% formalin 3.20, and alkaline metal hydroxide catalyst 0.10 moles were heated at 70° until the HCHO concentration dropped below 9%, cooled below 60°, treated with 0.55 mole I, treated with 0.16 mole urea, treated with 0.066 moles NH₃, heated 20 min at 50°, neutralized, and combined with methoxymethylmelamine (65% aqueous solution, methylolation degree 3.8, etherification degree 2.0) and soya protein solution to yield a clear amber fluid with solid content 60%, free HCHO content <1%, and free phenol content 0.5%. The stable dispersion was diluted with water to give a dispersion containing 2-25% solids which was applied to a glass fiber matrix, dried, molded, and cured 2 min at 400°F to yield the title material.

L5 ANSWER 31 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1973:31535 CAPLUS
DN 78:31535
TI Acrylate-based binders for stoving lacquers
IN Wingler, Frank; Pedain, Josef; Mueller, Richard
PA Farbenfabriken Bayer A.-G.
SO Ger. Offen., 17 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2110053	A	19720907	DE 1971-2110053	19710303
PRAI	DE 1971-2110053		19710303		

AB The binders for solvent- and scratch-resistant stoving (<90.deg.) lacquers for automobiles or tools consisted of N-alkoxymethylurethane group-containing acrylate, melamine, or urea-formaldehyde resins and an acid catalyst. Thus, a mixture of xylene 600, MeOCH₂NCO 48.5, 1,4-butanediol monoacrylate 80, styrene 500, and Bu acrylate 270 g under N was kept standing 12 hr, N-methylolacrylamide 70, N-(methoxymethyl)acrylamide 60, tert-dodecanethiol 20, and isopropanol 300 g were added, the mixture was heated 5 hr at 70.deg. (during which 20 g tert-butyl perpivalate was added), and 12 hr at 60.deg. to give a methoxymethyl isocyanate-1,4-butanediol monoacrylate-styrene-butyl acrylate-N-methylolacrylamide-N-(methoxymethyl)acrylamide copolymer [37396-28-4] lacquer solution of solid content 49% and outflow time (DIN 4 cup) 158 sec. The solution was mixed with an equal part TiO₂ (rutile) an diluted with xylene to outflow time 44 sec. The lacquer was heated 30 min at 89.deg. to give a coating of thickness .sim.45 μ , pencil hardness 4 H, Gardner impact indentation 30 inch/pound, Erichsen indentation (DIN 53,156) 7.7 mm, and resistant towards xylene (6 min at room temperature) and detergents.

10/542,306

L5 ANSWER 32 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1972:406356 CAPLUS
DN 77:6356
TI Melamine from urea
IN Slugocki, Eugeniusz; Wojtowicz, Tadeusz; Mankowski, Andrzej; Grzesik,
Alfons; Galantowicz, Marek
PA Zaklady Azotowe "Kedzierzyn"
SO Pol., 2 pp.
CODEN: POXXA7
DT Patent
LA Polish
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	PL 64437		19720115	PL	19680401
AB	Melamine [108-78-1] was prepared in 93.7% yield and 99.8% purity by proportionating continuously urea granules into a catalyst bed fluidized with NH3 at 370.deg. followed by passing the gaseous product through a solid catalyst bed at 450.deg..				

L5 ANSWER 33 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1969:491645 CAPLUS
 DN 71:91645
 TI Aromatic polyphosphonic acids, salts and esters
 IN Budnick, Edward G.
 PA Plains Chemical Development Co.
 SO U.S., 4 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3463835	A	19690826	US 1965-493217	19651005
PRAI	US 1965-493217	A	19651005		

AB Aromatic poly(phosphonic acids), salts, and esters were prepared and used as curing agents for melamine-HCHO and urea-HCHO resins, as detergent additives, extractants, sequestering agents, metal complexing agents, corrosion inhibitors, and stabilizers. The esters were prepared by treating PhCH₂Cl (I) or PhCCl₃ (II) with a diaryl phosphite; hydrolysis with an acid catalyst gave the corresponding acid. Thus, 138.10 g. (EtO)₂HPO was added dropwise in 35 min. to a mixture of 23.0 g. Na, 90 cc. xylene, and 80 cc. tetrahydrofuran under N, the mixture heated to 100° until all the Na metal was gone and cooled to 60-70°. I (80.5 g.) was added in 25 min., the mixture heated 4 hrs. at 70-5° and cooled to 60°, the solution filtered, and the solid boiled 8 times with C₆H₆. The C₆H₆ extract was distilled to give PhCH-[PO(OEt)₂]₂ (III), b₆ 125°. Hydrolysis of III in refluxing concentrated HCl for 24 hrs. gave PhCH[PO(OH)₂]₂. PhC[PO(OH)₂]₃ (IV) was similarly prepared from II. Treatment of IV with NaOH gave PhC[PO(ONa)₂]₃, which formed a chelated lead phenylmethane-triphosphonate with Pb(OAc)₂·3H₂O.

L5 ANSWER 34 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1969:48420 CAPLUS
DN 70:48420
TI Catalytic polymerization and copolymerization of olefins
PA Solvay et Cie.
SO Brit., 5 pp.
CODEN: BRXXAA
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1131786		19681030	GB 1967-8212	19670221
PRAI	FR		19660224		

AB An aminoplast containing free methylol groups was treated with a metal halide, such as TiCl_4 , to give a catalyst, which with a trialkylaluminum activator was used in the polymerization of C_2H_4 , propylene, and C_2H_4 -propylene mixts. Thus, 126 g. melamine and 365 g. 37% aqueous HCHO was heated 20 min. under reflux, cooled to give a solid, which was dried 2.5 hrs. at 75° , pulverized to a $500\text{-}\mu$ particle size and dried 3 hrs. at 120° in N. The melamine- HCHO resin (I) was suspended in 150 cc. TiCl_4 (II), heated to 130° over 45 min. and held for 1 hr. The mixture was cooled to room temperature, separated, and anhydrous

hexane washed and dried to give the modified support carrier containing 175 g. $\text{Ti}/1000$ g. A solution containing 0.955 g. iso- Bu_3Al in hexane and 1 l. purified

hexane containing 0.73 g. catalyst (I-II product) were added to a N-flushed autoclave, which was heated to 80° and H and C_2H_4 were added, each under 10 kg./cm.² partial pressure. The total pressure was kept constant for the reaction duration by adding C_2H_4 . After 2 hrs., 196 g. polyethylene was obtained, which represented a yield of 268 g. polyethylene/g. catalyst. Polypropylene and ethylene-propylene copolymer (III) were similarly prepared III was mixed with a vulcanizable composition and vulcanized 45 min. at 165° to give good mech. properties. III was also prepared with an iso- Bu_3Al -activated urea- HCHO - TiCl_4 catalyst.

10/542,306

L5 ANSWER 35 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1968:427463 CAPLUS
DN 69:27463
TI Synthesis of melamine
IN Manes, Milton
PA Chemical Construction Corp.
SO U.S., 4 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3386999	A	19680604	US 1966-526491	19660210
	NL 6701353	A	19670811	NL 1967-1353	19670127
	BE 693668	A	19670803	BE 1967-693668	19670203
PRAI	US 1966-526491	A	19660210		

AB An improved method of melamine (I) synthesis by catalytic (B phosphate) conversion of urea is described. Cyanic acid and other I precursors are effectively hydrolyzed to NH3 and CO2 prior to the condensation of solid I from the hot gaseous mixture derived from the catalyst bed. The resultant product solid I is of high purity and is completely free from urea or by-product compds., and may be utilized directly in resin manufacture or for other purposes requiring high-purity I, without recrystn. or other purification processes.

L5 ANSWER 36 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1968:114657 CAPLUS
 DN 68:114657
 TI Melamine
 IN Watson, Eugene Kerr; Witheford, John M.
 PA American Cyanamid Co.
 SO U.S., 5 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3377350	A	19680409	US 1967-625707	19670324
PRAI	US 1967-625707	A	19670324		

AB Molten urea is mixed with an atomizing gas and sprayed at
 ≥sonic velocity into a bed of catalytic solids for conversion to
 melamine (I) which is then removed by an NH₃-containing sweeping gas.
 Flow rate of the atomizing gas is ≥ a critical flow rate computed as
 $0.748 + 105 + AP(\gamma M/T)0.5$ lb./hr. (A = discharge
 orifice area, P = reactor pressure in psia., γ = constant
 pressure/constant volume sp. heats ratio, M = gas mol. weight, T = absolute
 temperature
 atomizing gas). The process permits continuous operation without the
 agglomeration of bed particles found in other processes using
 solid urea or nonpneumatic injection of liquid
 urea. Thus, atomizing NH₃ gas was heated to 147° and
 forced into a heated reactor (15 psia.) at 3 lb./hr. (computed critical flow
 rate = 2.3 lb./hr.) through a nozzle with discharge orifice 1.205 +
 10-5 ft.² NH₃ sweeping gas was heated to 200° and passed into the
 reactor at 17 lb./hr. through a bed of silica gel powder (50 μ diameter)
 heated to 375°. Molten urea at 135° was passed
 through the atomizing nozzle at 20 lb./hr. and converted to I, which was
 carried by the sweeping gas through dust filters into air-cooled
 condensers. After 4 hrs. continuous operation, the reactor and
 catalyst were free from agglomerated materials.

10/542,306

L5 ANSWER 37 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1968:105252 CAPLUS
DN 68:105252
TI Preparation of melamine from urea
IN Tribit, Samuel W.
PA American Cyanamid Co.
SO U.S., 2 pp.
CODEN: USXXAM

DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3377349	A	19680409	US 1965-474165	19650722
PRAI	US 1965-474165	A	19650722		

AB Melamine is produced by passage of urea over a fixed, substantially catalyst-free bed of heated, inert solid particles followed by passage of the decomposition products over a catalyst effective for producing melamine. Thus, liquid urea was fed at 174.8 g./hr. into a heated cracking furnace (450-500°) packed with 0.125-0.5 in. diameter stainless steel balls with cocurrent passage of 1.5 moles NH₃/hr. and counter current passage of 8 moles NH₃/hr. and the urea decomposed by flash-vaporization to isocyanic acid. This product was passed to the bottom of a bed of fluidized SiO₂ gel catalyst at 377° and 1 atmospheric, where it was converted to melamine, which can be recovered in a high degree of purity by recrystn. from water.

L5 ANSWER 38 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1968:96490 CAPLUS
DN 68:96490
TI Thermosetting aminoplast molding powders
IN Pfeiffer, Gerhard F.
SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3376239	A	19680402	US 1965-469363	19650607
PRAI	US 1965-469363	A	19650607		

AB The title compns., which are free-flowing and suitable for injection, transfer, or compression molding, were prepared by condensing paraformaldehyde (I) with a solid amine in the presence of an inert filler and alkaline catalyst, grinding and drying the condensate while suspended in a gaseous fluid, compressing in the presence of an acidic catalyst, and granulating. Thus, α -cellulose 50, urea 79, I 60, NH₃ 0.65, hexamine 3, and Zn stearate 0.25 lb. were heated at 170-180° for 15 min. in a ribbon blender and the resulting mixture was fed into a grinding apparatus to yield a dry powder of the consistency of flour. The dry material was mixed with 1% glycerol chlorohydrin in a densifier at 200° for 1 min. and subsequently granulated to yield a high-flow molding powder. Similar powders were prepared by condensing I with melamine or thiourea.

10/542,306

L5 ANSWER 39 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1967:483652 CAPLUS
DN 67:83652
TI Treatment of an unsolidified earth formation developed by a borehole
IN Ayers, William M.
PA Dow Chemical Co.
SO Ger., 4 p.
CODEN: GWXXAW
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1238415		19670413	DE 1965-D46451	19650205
	US 3327783		19670627	US 1964-351910	19640316
PRAI	US		19640316		

AB In this process, a solid substance, e.g. suspensions of sand in a mineral oil, is injected into a loose layer with a pressure insufficient for breaking up the formation. The particle size of the solids is chosen so that the diameter of the interspaces is lower than the mean diameter of the loose layer. After rinsing out the remaining solids with water or salt water, a liquid resin capable of being hardened (epoxy, phenol-HCHO, urea-HCHO, or phenol-melamine resin) is injected. The liquid resin is mixed with a diluent, e.g. MeOH, EtOH, or iso-PrOH, and with a catalyst such as NaOH.

L5 ANSWER 40 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1967:56158 CAPLUS
 DN 66:56158
 TI Tropolone-aldehyde condensates having chelate-forming groups
 IN Donaruma, Lorraine G.
 PA du Pont de Nemours, E. I., and Co.
 SO U.S., 10 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3295939		19670103	US 1962-208900	19600726

AB Tropolone (I) is condensed with an aldehyde and, if desired, another comonomer in aqueous solution containing a catalyst to give solid polymers. Thus, I 12.2, 37% HCHO 10, and NaOH 4 g. were dissolved in 66 ml. H₂O, refluxed 24 hrs., cooled, and left standing for 12 hrs. The pH was adjusted to 5 with HOAc, and the H₂O was decanted. The polymer residue was dissolved in Me₂NCHO and precipitated with saturated NaCl solution After 12 hrs. drying under vacuum at 60°, yield was 11 g. yellowish resin (II) with an inherent viscosity (1 g./100 ml. Me₂NCHO at 25°) of 0.04. Other polymers were prepared by using various proportions of I and HCHO, and phenol, resorcinol, melamine, dimethylolurea, tert-butylphenol, and furfural as comonomers. II preswollen with Me₂NCHO was used to form chelated metal derivs. by equilibrating 0.1 g. of resin with 25 ml. buffered 0.1M salt solution for 18 hrs. (metal salt, solution pH, and weight % metal in resin given): Cr(NO₃)₃, 4, 0.70; Th(NO₃)₄, 3, 3.33; Ce(NO₃)₃, 4, 2.00; Co(NO₃)₂, 4, 1.58; NiCl₂, 4, 0.59; CuSO₄, 4, 4.34; FeSO₄, 4, 10.00; Al₂(SO₄)₃, 4, 1.16; SnCl₂ (1M), 1.2, 25.80; and SnCl₄ (1M), 1.2, 35.10. A higher percentage of metal can be obtained by adding the salt solution to a solution of II and Me₂NCHO. A dry mixture of 50 parts

II and 50 parts Al powder was used to bond 2 Al sheets. After curing for 2 hrs. at 350°F. and 2000 psi., the average glue-line thickness was 7.9 mil. and the bond had a maximum tensile-shear strength 1720 psi., which increased to 2147 after annealing for 1 hr. at 350°F. A stainless-steel laminate prepared as above with an Fe-II adhesive had a tensile strength of 1688 psi. The adhesives also gave excellent results when compounded with ethylene glycol, poly(vinyl alc.), di-Bu phthalate or paraformaldehyde, with asbestos powder, Al₂O₃, or AlPO₄. II in Me₂NCHO was used to bond plywood (III) strips, poly(ethylene terephthalate) (IV) and III, IV and brass, III and brass, a pyromellitic acid-diaminodiphenyl ether copolymer (V), and V and Al, forming strong bonds in all cases. II was mixed with an abrasive and molded into a grinding wheel, and was also used to prepare molded glass-fiber laminates. The resins can be used as ion-exchange resins, adhesives, and molding compns.

L5 ANSWER 41 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1967:10906 CAPLUS
DN 66:10906
TI New OSW process makes melamine direct from urea
AU Schmidt, Alfred
CS Osterr. Stickstoffwerke A.-G., Linz, Austria
SO Hydrocarbon Processing (1966-2001) (1966), 45(11), 146-50
CODEN: HYPRAX; ISSN: 0887-0284
DT Journal
LA English
AB Urea is first converted to a gaseous mixture of isocyanic acid and NH_3 by rapidly heating to 350° , and this mixture is passed over a solid catalyst (silica gel, alumina gel, or B phosphate) to give melamine vapor and CO_2 , the NH_3 remaining unchanged. The formation of melamine from isocyanic acid is exothermic, liberating 1100 kcal./kg. melamine. The solid melamine is obtained from the reaction gases by quenching with water. The suspension of melamine in NH_3 liquor formed is centrifuged and recycled into the quencher. The solid melamine is washed with water and dried. The over-all yield of melamine from urea is 85-90%. To obtain high yields, the urea is heated quickly to the temperature 350° , within a few sec., otherwise side products are formed. The melamine coming from the centrifuge is suitable for all uses without recrystn.

10/542,306

L5 ANSWER 42 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1966:439353 CAPLUS
DN 65:39353
OREF 65:7384g-h
TI Continuous production of nylon-6
IN Ferrand, Jean G.; Cardi, Marceau
PA Societe Nationale des Petroles d'Aquitaine
SO 12 pp.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	BE 666466		19651103	BE	19650706
	NL 6509480			NL	
PRAI	FR		19640724		

AB In the title process, effected with a Na catalyst and toluene di-isocyanate initiator, rings of the polyamide are introduced at regular intervals into the base of the polymerization tube so as to be forced upwards by the polymerization feed, the rings acting as pistons to force along the liquid, pasty and solid phases of the reaction mixture and thus prevent solid polymer from adhering to the tube walls.

L5 ANSWER 43 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1966:439352 CAPLUS
DN 65:39352
OREF 65:7384f-g
TI Encapsulating liquid droplets
PA Pilot Pen Co., Ltd.
SO 17 pp.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	FR 1415039		19651022	FR 1964-992214	19641021
PRAI	JP		19631021		

AB Two components, dissolved in a hydrophilic and a hydrophobic phase, react at the interface to form a solid polymer insoluble in both, when one is dispersed in the other. A catalyst can be added to either phase. Thus, 0.5 g. terephthaloyl chloride in 3 g. benzene was mixed with 5 g. Epikote 828 and added to bisphenol A 1.0, gum arabic 0.2, and hexamethylenediamine 0.1 g. in 100 ml. 1% NaOH. On stirring 4 hrs. at 40°, a solid layer around the hydrophobic particles was formed.

L5 ANSWER 44 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1966:11561 CAPLUS
DN 64:11561
OREF 64:2110a-c
TI Apparatus for continuous separation of melamine
IN Marten, Jerome H.
PA Chemical Construction Corp.
SO 26 pp.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BE 659588		19650811	BE	
	NL 6501633			NL	
PRAI	US		19640211		

AB The apparatus is described, with diagrams, for the improved separation of melamine (I). Urea (II) is converted into a mixture of I vapor, CO₂, and NH₃ at 343-427° in the presence of a catalyst, e.g. boron phosphate (III), SiO₂, or Al₂O₃. The gases are accelerated downwards by means of deflectors, and cooled rapidly by a transverse flow of aqueous refrigerant at 65-76°. A solid dispersion of I is obtained, free of precursors, decomposition products, and polymers of I. The CO₂, NH₃, and refrigerant are recovered. Thus, 358 kg./hr. II and 264 kg./hr. NH₃ are heated to 400° at 1.75 kg./cm.², the II partly forming cyanuric acid (IV) and I. The current of vapor passing over III contains 366 kg./hr. NH₃, 60 kg./hr. CO₂, 139 kg./hr. IV, and 57.3 kg./hr. I. The reaction is moderated by 272 kg./hr. NH₃ at 177° to give a mixture of I, NH₃, and CO₂ at 400° which is cooled by an aqueous refrigerant at 69° containing 4.040 kg./hr. H₂O, 1.605 kg./hr. NH₃, 1.225 kg./hr. CO₂, and a little I. The resulting gas contains 645 kg./hr. NH₃, 142 kg./hr. CO₂, and 130 kg./hr. H₂O vapor. The dispersion of I, containing 3.930 kg./hr. H₂O, 1.610 kg./hr. NH₃, 1.253 kg./hr. CO₂ and 114.5 kg./hr. I at 79° and 2.8 kg./cm.² pressure is centrifuged. The product is washed with 11.45 kg./hr. H₂O to give a solid containing 114.5 kg./hr. I and 2.3 kg./hr. H₂O which is then dried to give pure I. The liquid from the centrifuge consists of 3.950 kg./hr. H₂O, 1.610 kg./hr. NH₃ and 1.253 kg./hr. CO₂. H₂O (93 kg./hr.) is added and this solution is recycled as cooling liquid.

L5 ANSWER 45 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1964:16899 CAPLUS
DN 60:16899
OREF 60:2985c-f
TI Guanidine or melamine process
IN Shaver, Kenneth J.
PA Monsanto Chemical Co.
SO 8 pp.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3108999		19631029	US 1961-108299	19610508
PRAI	US		19610508		

AB Guanidine (I) is prepared by heating urea with a catalyst consisting essentially of a polymeric reaction product of anhydrous NH₃ and P₂O₅ at a pressure below 200 lb./in.² gage and a temperature in the range 132-350°. I may then be separated from the reaction mass or, alternatively, the mixture may be heated to 290-350° in an atmosphere of gaseous NH₃ at atmospheric pressure to form melamine. E.g. 100 g. solid P₂O₅ was added slowly and with stirring to 500 g. liquid NH₃ at -33°. Evaporation of the NH₃ gave 123 g. product containing 18.5% N, 57% of the N atoms being bonded to P atoms. A mixture of 20 g. catalyst and 7 g. powdered urea (20-50 μ particles) was heated at atmospheric pressure at 230° and atmospheric pressure for 45 min. The reaction mass (26.5 g.) was washed with 100 ml. of a 25% aqueous solution of EtOH in which I

is soluble and the catalyst is not; 10 ml. 15% H₂SO₄ was then added to the filtrate to precipitate 7.5 g. of guanidine sulfate (II) representing a 69% yield based on a theoretical conversion of one mole of I per mole of urea charged. When the process was repeated with 20 g. catalyst and 5 g. urea at 230° and 55 lb./in.² gage for 30 min., 5.5 g. II (96% yield) was obtained. When the reaction mass obtained from 20 g. catalyst and 7 g. urea as above was heated to 310° at atmospheric pressure in a stream of anhydrous NH₃ (0.1 l./min.) for 90 min., 3.2 g. (61% yield based on a theoretical conversion of 3 moles of urea/mole of melamine) of substantially pure melamine was condensed out of the gas stream.

L5 ANSWER 46 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1960:132415 CAPLUS
DN 54:132415
OREF 54:25398h-i,25399a-b
TI Fluorescent magnetic-inspection compositions
IN Kazenas, Zenon
PA Steele, John D.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2936287		19600510	US 1956-605192	19560801
AB	Magnetic particles for use in fluorescent magnetic inspection compns. are prepared by coating paramagnetic cores with a resin impregnated with a fluorescent dye. A preferred core is carbonyl Fe, but powdered Fe, Fe ₃ O ₄ , and various ferromagnetic alloys may be used. Epoxy resins are preferred, but melamine-HCHO, urea-HCHO, and fatty or rosin acid esters of epoxy resins may be used. The best fluorescent agent is 2-hydroxy-1-naphthaldazine (I), although the fluorescent metallic salts of 8-quinolinol may be used. If nonfluorescent particles are desired, TiO ₂ , vermillion, molybdate orange, Hansa yellow, Milori green, Cu phthalocyanine blue, and C black may be used as inert pigments. Thus, magnetic particles were prepared from 400 parts carbonyl Fe particles of 5 μ size, 40.8 parts Shell Epon 828 epoxy resin having 175-210 epoxide equivs., and 7.2 parts m-phenylenediamine catalyst. The catalyst was dissolved in the resin and the carbonyl Fe milled in to give a thick paste. After standing overnight, the resin was a friable solid, and the mixture was micropulverized or rod-milled to a fine powder. The mixture was then rod-milled for 24 hrs. with 40 parts I. The powder was cured for 0.5 hr. at 150° and rod-milled to give 6 or 7 μ particles. Particles were tested as fluorescent magnetic materials and claimed to exhibit greater sensitivity, less background scum, and longer effective fluorescent life than prior art materials.				

L5 ANSWER 47 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1959:102907 CAPLUS

DN 53:102907

OREF 53:18512d-g

TI Polymers from unsaturated aldehydes and polypentaerythritols

IN Fischer, Rudolph F.; Mika, Thomas F.

PA Shell Development Co.

DT Patent

LA Unavailable

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2895945		19590721	US 1956-600719	19560730

AB Prepolymers are prepared by interaction of α,β -unsatd. aldehydes having ≤ 10 C atoms, such as acrolein, crotonaldehyde, or substituted derivs. thereof, with polypentaerythritols such as di- and tripentaerythritol at 50-200° (50-150° preferred) until a homogeneous solution results. A catalyst such as p-toluenesulfonic acid (preferred), H₂SO₄, H₃PO₄, or other nonoxidizing acid is added to the extent of 1.5-6 mole %. For aldehydes solid at the reflux temperature, mutual solvents are used. The reaction products of acrolein with dipentaerythritol and of crotonaldehyde with tripentaerythritol have polyol aldehyde ratios of about 1:2 and 1:5, resp. Thus, acrolein 1420, dipentaerythritol 490, and 50% aqueous p-toluenesulfonic acid 10 parts were heated for 3 hrs. with agitation to obtain a homogeneous mixture, heating was discontinued, 25 parts NaHCO₃ added, agitation continued for 1 hr., the mixture filtered, excess acrolein stripped off at atmospheric pressure, and H₂O

removed under vacuum to give 805 parts of a clear colorless material soluble in toluene, C₆H₆, etc., which flows at 80-100°. Heating for a few hrs. both at 140° and 172° gave a tough, hard resin. Examples of the use of α,β -dimethylacrolein, crotonaldehyde, and tripentaerythritol in the resins are included. The prepolymers were found to cure readily with cellulosic compds. containing OH groups, e.g. nitrocellulose or cellulose acetate. They were advantageously blended with materials containing active vinyl groups. They could also be cured with other resins, e.g. phenol-, urea-, or melamine-HCHO resins. The blends are useful as surface coatings.

L5 ANSWER 48 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1955:73705 CAPLUS

DN 49:73705

OREF 49:14041a-d

TI (Vinylalkyl)melamines

IN De Benneville, Peter L.; Melamed, Sidney

PA Rohm & Haas Co.

DT Patent

LA Unavailable

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2694687		19541116	US 1953-348104	19530410
	DE 1081232			DE	

AB (Vinylalkyl)melamines (I) are obtained from dicyandiamide (II) and (vinylalkyl)cyanamides (III) at 50-125° in the presence of 2-20% of a basic catalyst and inert solvents such as alcs. The I polymerize at 50-90° in the presence of 0.1-2% of a free-radical catalyst, particularly of the azo type. The III are prepared from a cyanogen halide and an aminoalkyl vinyl ether. E.g., a mixture of CH₂:CHOCH₂CH₂NMeCN 12.6, II 10, and KOH 2 in iso-PrOH (IV) 50 parts is refluxed 6 hrs., allowed to stand 16 hrs., and chilled to 0°; the filtered, washed (H₂O) precipitate, m. 136-9° (137.5-9° after recrystn. from IV), N-methyl-N-(vinylalkyl)melamine (V), is fungitoxic. V 21.5 in HCONMe₂ 21.5 and (:NCMe₂CO₂Me)₂ 0.3 part heated 16 hrs. at 75° in N atmospheric precipitate with Me₂CO a white polymer (VI). VI 2.1, aqueous 37% HCHO solution 8.32, H₂O 10 and aqueous Na₂CO₃ solution 0.03 part are heated 10 min. at 80-90° and 20 min. at 60°, 0.092N HCl 61 is added after cooling, and the solution diluted with H₂O to 100 parts; the resulting solution of the hydroxymethyl derivative of VI is used for high wet strength paper. Other examples of I are N-(1,1-dimethyl-2-vinylalkyl)melamine, m. 96-8° (from C₆H₆), whose polymers are soluble in mineral and organic acids and insol. in H₂O, and are sizing agents; N-methyl-N-(2-vinylalkyl)melamine, m. 95-7° (from PhMe), N-3,5,5-trimethylhexyl-N-2-vinylalkylmelamine, a waxy solid, m. 72-8°; N-cyclohexyl-N-(2-vinylalkyl)melamine, m. 144-6°; N-2-ethylhexyl-N-(2-vinylalkyl)melamine. Copolymers of I and 1 or more monovinyl compds. (VII) are used as adhesives, coatings, and textile finishes. Examples of VII are H₂NCONHCH₂CH₂OCH:CH₂, CH₂:CMeCO₂Me, Et and Bu acrylate, bis(vinylalkyl) urea.

L5 ANSWER 49 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1955:24074 CAPLUS
DN 49:24074
OREF 49:4707i,4708a-c
TI Esterification of olefins using ion-exchange resins as catalysts
IN Cottle, Delmer L.
PA Standard Oil Development Co.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2678332		19540511	US 1949-134878	19491223
AB	Solid cationic exchange resins are employed as catalysts in the liquid phase esterification of olefins (I) with organic acids. The resin catalyst shows the following advantages over conventional sulfonic acid: ease of reaction and recovery of catalyst and light colored products. The exchange resins suitable as catalysts are of the thermosetting type (phenolic, urea, melamine, coumarone-indene) containing strongly acidic groups (sulfonic, carboxylic, thio). The number of cationic groups per mol. is balanced to yield a strongly active yet insol. ion exchange resin. The resins become spent on continued use but their catalytic activity can readily be regenerated by treating with dilute acid followed by a water wash. Speed and completeness of reaction are functions of the catalyst surface area and resin particle size ranges from 20 to 50 mesh. I may be ethylene, butene, isoprene, styrene, or mixts. thereof. II may be of the mono or polybasic type having 2 to 12 C atoms. The molar ratio of I-II may range from 5:1 to 1:5. An example of the process is given as follows: molar quantities of HOAc and 2-butene with 113 g. of a dried phenol-formaldehyde-sulfonate (with sulfonic group attached to benzene nucleus thru a methylene group) were placed in a bomb type reactor at 100° for 6 hrs., the mixture is decanted from the resin particles (which may be reused without further treatment), and the ester product is recovered by distillation Yields are approx. 50 mole-%.				

L5 ANSWER 50 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1954:23295 CAPLUS
DN 48:23295
OREF 48:4196c-e
TI Coating ceramic and masonry products
IN Russell, Alexander H.
PA Burns & Russell Co.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2657153		19531027	US 1948-31222	19480604
AB	Ceramic or baked clay products such as bricks, pottery, wall, and veneer tile, masonry building units, cinderblocks, and concrete slabs are coated with a resinous compound in a dry or liquid form and the resin is cured at 125-250°F. A composition containing 5 lb. TiO ₂ pigment, 14 lb., 6 oz. alkyd resin solid as "Rezyl 387-5" (55% alkyd resin and 45 % xylene), 10 lb., 10 oz. melamine-aldehyde-resin (50% resin solids, 25% BuOH, 25% xylene) and 4 lb. xylene has a viscosity of 60 seconds in a Number 4 Ford cup and is suitable for coating brick. Resins of melamine-aldehyde, urea-HCHO, alkyd- and PhOH-HCHO, and their combinations with a suitable solvent and catalyst will give a surface coating highly resistant to dilute acids, alkalies, grease, ink stains, steam, moderate temperature changes, and high-impact resistance.				

10/542,306

L5 ANSWER 51 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1950:13920 CAPLUS
DN 44:13920
OREF 44:2764e-g
TI Creaseproofing textiles
IN Balassa, Ladislaus
PA United States Finishing Co.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2493381		19500103	US 1947-759462	19470701
AB	Textile fabrics are creaseproofed by applying an aqueous solution of a thermosetting polymerizable resin, applying a discontinuous layer of solid water-insol. finely divided hydrophilic material (I) and intimately mixing I with the excess solution on the surface of the fabric, then removing I, whereby the fabric is cleared of any free excess resin solution, and insolubilizing the resin in the presence of an acid catalyst. For example, 200 g. of methylol-urea are dissolved in distilled water 98.25 g. at 180°F. and water 98.25 g. at 40-60°F. to cool the solution Diammonium phosphate (catalyst) 3.5 g. is dissolved in a min. of water and added to the resin solution at 90°F. A rayon fabric is padded in this solution, clay is distributed over the surface, and vigorously brushed into the fabric on both sides. The fabric is shaken to remove loose clay, dried at 230°F. for 3 min., then cured in an oven for 4 min. The fabric is washed and pressed dry. The fabric had a soft, full hand, 82% crease resistance, tensile strength of 63 lb., and an abrasion resistance substantially equal to the original fabric both warpwise and fillingwise.				

L5 ANSWER 52 OF 52 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1949:14306 CAPLUS
 DN 43:14306
 OREF 43:2807i,2808h-i
 TI Preparation and properties of alkylphenol-acetylene resins
 AU Zoss, A. O.; Hanford, W. E.; Schildknecht, C. E.
 SO Journal of Industrial and Engineering Chemistry (Washington, D. C.)
 (1949), 41, 73-7
 CODEN: JIECAD; ISSN: 0095-9014
 DT Journal
 LA Unavailable
 AB A solid resin, Koresin (I), with mol. weight 800-1100 is made by
 reaction of p-tert-butylphenol and C₂H₂ at 210° and 200 lb./sq. in.
 with Zn naphthenate as catalyst, in an inert diluent such as N
 (70%) and in the absence of O for safety. Duplication of the German
 material, reaction variables, phys. properties, applications, and reaction
 mechanism are discussed. I is one of the most effective tackifiers for
 Buna S and GR-S known and has been suggested as a replacement for rosin
 ester in varnish formulas. The product of phenol and C₂H₂ is of interest
 in textile sizing.

10/542,306

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COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE

ENTRY

151.20

TOTAL

SESSION

151.41

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

ENTRY

-39.00

TOTAL

SESSION

-39.00

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